

CLAIMS

We claim:

1. a seat for a vehicle, comprising:
 - a seat back,
 - a seat cushionmeans for power adjustment of the seat, comprising at least one motor coupled to the seat, and:
 - a rollover sensor, wherein the motor(s) operates at a low speed during normal operation, and at a very high speed in response to a signal from the rollover sensor indicating the vehicle is in a rollover condition.
2. The seat of claim 1, wherein the power adjustment means is at least one of:
 - seat recliner wherein at least one of the seat cushion and back is reclined rearward rapidly by a motor in response to the signal from the rollover sensor,
 - a seat height adjuster wherein the seat is lowered rapidly by a motor in response to the signal from the rollover sensor,
 - or
 - a seat position adjuster wherein the seat is moved either forward or backward relative to the front of the car rapidly by a motor in response to the signal from the rollover sensor.

3. The seat of claim 2, further comprising:

a seat position adjuster wherein the seat is moved in a side-to-side direction relative to the front of the car rapidly by a motor in response to the signal from the rollover sensor.

4. The seat of claim 2 or 3, further comprising:

compression of at least one of the seat back and seat cushion in response to a signal from the rollover sensor indicating the vehicle is a rollover condition.

5. The seat of claim 1, further comprising an integrated safety belt, with a pre-tensioner, wherein the pre-tensioner is triggered in response to a signal from the roll-over sensor.

6. The seat of claim 4, comprising:

mechanisms that sense the position of the seat, and a system to maximize the safety of a seat occupant by determining, from the position of the seat and the vehicle configuration, the optimum sequence, direction and magnitude of seat motions in response to the rollover signal.

7. The seat of claim 6, wherein the seat further comprise sensing of at least one of the weight or size of the occupant.

8. a seat for a vehicle, comprising:

a seat back,

a seat cushion

means for power adjustment of the seat for the seat,

comprising at least one motor coupled to the seat, and:

a rollover sensor, wherein the motor(s) operates at a low speed during normal operation, and at a very high speed in response to a signal from the rollover sensor indicating the vehicle is in a rollover condition,

means for compressing at least one of the seat back and seat cushion in response to a signal from the rollover sensor

indicating the vehicle is a rollover condition, and:

an integrated safety belt with pre-tensioner

9. The seat of claim 9, wherein the power adjustment means is at least one of:

seat recliner wherein at least one of the seat back and cushion is reclined rearward rapidly by a motor in response to the signal from the rollover sensor,

a seat height adjuster wherein the seat is lowered rapidly by a motor in response to the signal from the rollover sensor,

or

a seat adjuster wherein the seat is moved forward or backward relative to the front of the car rapidly by a motor in response to the signal from the rollover sensor.

10. The seat of claim 10, further comprising a seat position adjuster wherein the seat is moved side-to-side relative to the front of the car rapidly by a motor in response to the signal from the rollover sensor.

11. a seat for a vehicle, comprising:

a seat back,

a seat cushion

means for power adjustment of the seat for the seat,

comprising at least one motor coupled to the seat,

a rollover sensor, and:

a pyro actuator disposed between the motor and the seat,

wherein, in response to a signal from the rollover sensor,

the pyro actuator fires and pushes the seat such as to cause very rapid movement of at least one of the seat back and seat cushion.

12. The seat of claim 11 wherein the movement is reclining.